

WHAT IS CLAIMED IS:

1. A system for sharing power in a computer peripheral device, comprising:
a local power supply;

5 a power supply interface adapted to receive an external power source; and

a power sharing circuit coupled to the local power supply and to the power supply interface, the power sharing circuit structured to simultaneously provide power to the peripheral device from both the local power supply and from the external power source.

10 2. The system according to claim 1, wherein when an amount of power required by the peripheral device is below a power threshold, the power sharing circuit is structured to provide power to the peripheral device from either the local power supply or from the external power supply.

15 3. The system according to claim 2, wherein the power sharing circuit is structured to provide power to the peripheral device from the external power supply when the amount of power required by the peripheral device is below the power threshold.

20 4. The system according to claim 2 wherein the power threshold is 100 mA.

25 5. The system according to claim 1, wherein the power sharing circuit comprises:
a resistive device coupled in series between the power supply interface and a load;
and
a zener diode coupled to the resistive device.

30 6. The system according to claim 5, further comprising a suspend circuit coupled between the external power source and the load, the suspend circuit structured to disconnect the load from the external power source responsive to a signal from the power source.

7. The system according to claim 1, wherein the power sharing circuit comprises:
a voltage regulator coupled in series between the power supply interface and a load;
and
a resistive device coupled in series between the voltage regulator and the load.

8. The system according to claim 7, further comprising a suspend circuit coupled between the external power source and the load, the suspend circuit structured to disconnect the load from the external power source responsive to a signal from the power source.

5 9. The system according to claim 1, wherein the external power source is a computer bus.

10 10. The system according to claim 9, wherein the computer bus is a Universal Serial Bus.

11. The system according to claim 1 wherein the local power supply comprises batteries.

12. A peripheral device comprising:
a load circuit for consuming power in the peripheral device;
a local power source for providing power in the peripheral device;
a power source interface adapted to receive an external power source; and
a power sharing circuit coupled to the local power supply and to the power supply interface, the power sharing circuit structured to provide power to the load circuit from both the local power source and from the external power source at the same time.

25 13. The system according to claim 12, wherein when an amount of power required by the load circuit is below a power threshold, the power sharing circuit is structured to provide power to the peripheral device from either the local power source or from the external power source.

30 14. The system according to claim 12, wherein when an amount of power required by the load circuit is below a power threshold, the power sharing circuit is structured to provide power to the peripheral device from the external power source.

15. The system according to claim 12, wherein when an amount of power required by the load circuit is above a first power threshold, but below a second power threshold, the power sharing circuit is structured to provide power to the peripheral device from either the

external power supply, or from a combination of the external power supply and the local power supply.

16. The system according to claim 12, wherein the power sharing circuit
5 comprises:

a resistive device coupled in series between the power supply interface and the load circuit; and

a zener diode coupled to the resistive device and configured as a shunt regulator.

10 17. The system according to claim 12, wherein the power sharing circuit
comprises:

a voltage regulator coupled in series between the power supply interface and the load circuit; and

a resistive device coupled in series between the voltage regulator and the load circuit.

15 18. The system according to claim 12, wherein the external power source is a computer bus and is coupled to the power sharing circuit via a bus cable.

19. The system according to claim 18, wherein the computer bus is a Universal
20 Serial Bus.

20. A method for providing power to a load circuit in a computer peripheral device, comprising:

25 providing from a power source external to the peripheral device power requirements of the load circuit up to a threshold amount of power; and

providing from a combination of the external power source and from a power source internal to the peripheral device the power requirements of the load circuit if the power requirements of the load circuit exceed the threshold amount.

30 21. The method of claim 20, wherein providing power requirements from the external power source comprises providing power from a computer bus.

22. The method of claim 21 wherein providing power requirements from a computer bus comprises providing power from a Universal Serial Bus.

23. The method of claim 20, further comprising requesting the external power source to provide all the power requirements of the load circuit above the threshold amount.

5 24. The method of claim 23, wherein requesting the external power source to provide all the power requirements of the load circuit comprises sending a signal to a bus power manager.

10 25. A method for providing power to a load circuit in a computer peripheral device, comprising:

15 providing an initial amount of power to the load circuit from an external source; allowing the load circuit to increase the amount of power drawn from the external source; monitoring the amount of power drawn from the external source; and adding power from a local power source to the amount of power drawn from the external source once the amount of power drawn from the external source exceeds a threshold level.

20 26. The method of claim 25, wherein providing power from an external source comprises providing power from a computer bus.

25 27. The method of claim 26 wherein providing power from a computer bus comprises coupling the peripheral device to a Universal Serial Bus.

28. The method of claim 25, further comprising requesting the external source to provide all the power used by the load circuit if the amount of power drawn from the external source exceeds the threshold level.